St. Croix County Ground and Surface Water Quality Study Group
Presentation Notes

Date:	February 14, 2017
Presenters(s):	Kevin Masarik, UW-Stevens Point
Key Impacts:	*These potential impacts concern me most:* 1. *Even if farmers use NMPs, current guidelines are not adequate to protect water and many cash crop operations do not follow a NMP.* 2. *Many rural residents cannot afford to test wells annually. High levels of nitrates have been found in SCC wells but only a small percentage of all SCC wells have been tested.* 3. *Septic systems do not remove nitrates, chloride, viruses, hormones, or pharmaceuticals.* 4. *WDNR is not adequately staffed for proper inspections and enforcement.* 5. *Inadequate mapping showing water flows, karst areas, steep slopes, sinkholes leaves us vulnerable.* 6. *Pollution of local watershed could lead to extreme financial implications & years required for regeneration.*
Data Needs or Gaps:	*More information is needed on:* 1. *More accurate mapping of karst including sinkhole locations and possible French drains that may not yet be known.* 2. *Testing of more private wells, streams, ponds, etc., for wide variety of contaminates (nitrates, bacteria).* 3. *More precise measurements of depth of soil to bedrock, aquifer recharge and discharge mapping - data to be layered over type of bedrock mapping to show danger zones.* 4. *Presence of draglines, their use and potential harm.*
Policy or Program Gaps:	*Existing policies, rules, or programs do not appear to address:* 1. *Self-reporting by CAFOs not working - unreported spills.* 2. *Mapping not adequate for site-specific land use planning (zoning needs to address concentrated land use to minimize contamination - require crop rotation or tree plantings in sensitive areas).* 3. *NMP guidelines need to be strengthened and expanded to all farming operations.* 4. *Provide cost-sharing for well testing and data gathering; public notification along with emergency procedure to address sudden spikes in contaminants in well water samples.* 5. *Emergency cleanup plan for areas where wells test over 10 mg/L (e.g., require notification, provide clean drinking water).*

Opportunities for Action:	*Planning, study, monitoring, and tracking* 1. *Form rapid response team to investigate, report, and prosecute violations. Create incentives for whistle-blowers and financial consequences to polluting entity. Must have an emergency well-testing program of the area within the vicinity of the spill as well as downstream, including streams and ponds within that vicinity - activated for any spill.* 2. *Staff to identify how best to provide necessary mapping and where staff hasn't the expertise, contract with consultants to provide what the staff needs in order to identify danger zones and possible special zoning areas.* 3. *DNA analysis can identify source of contaminate (certain characteristics are specific to livestock and certain characteristics are specific to septic systems).*
	Rules, regulations, permitting, and compliance 1. *Revise zoning to include Well Head Protection Areas, Overlays in sensitive areas, special restrictions in concentrated housing and farming operations.* 2. *Staff schedule regular drive by & on-site inspections and document all violations for action by county. Develop a report to be presented to the County Board on a quarterly basis.* 3. *Develop treatment of septic sludge before land spreading or stop the practice completely and require all septic sludge to go to treatment plant.*
	Best practices and programming 1. *Create inventory of cropland and require crop rotation schedules.* 2. *Determine maximum number of animal units within county and limit permitting of additional animal units where already concentrated.* 3. *Reduce number of animal units in areas where vulnerable to contamination or currently have serious problems.* 4. *All nutrients applied in rural or commercial areas follow a NMP.* 5. *Provide financial incentives to rural residents, especially those with children or limited resources, for annual well testing.*
	Education, communications, and other 1. *Public information meetings on annual well-testing and groundwater contamination, including newly developed programs such as financial assistance for well testing and financial incentives for whistle blowers.* 2. *Provide notifications to all property owners when a spill is discovered and outline the county's plan to address the contamination and what land owners need to do to protect themselves.*